

REMARKS

I. STATUS OF CLAIMS

Claims 1 through 48 are currently pending.

Claim 42 has been rejected under 35 U.S.C. § 112, ¶ 2, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Through this amendment Claim 42 has been amended to address this rejection.

Claims 1 through 48 have been rejected under 35 U.S.C. § 103(a) as being obvious over Taccone in view of various combinations of Bergna, Swanson et al., Schimmel et al., Heine et al., Musschoot et al., and Easwaran.

A clean copy of the claims is enclosed with this amendment.

II. REJECTIONS OF CLAIMS

A. Rejection of Claim 42 Under 35 U.S.C. § 112, ¶ 2

Claim 42 has been rejected under 35 U.S.C. § 112, ¶ 2, as being indefinite. Specifically, the Office Action notes that the term "core" lacks antecedent basis. Applicant respectfully traverses this rejection.

Applicant thanks the Examiner for such a careful and thorough review of the application. Applicant has amended claim 42 to correct for the lack of antecedent basis. Applicant respectfully notes that this amendment is not substantive, and is merely made to correct the improper antecedent basis. In that regard, Applicant submits that the amendment to claim 42 results in no surrender of equivalents under *Festo*.

Again, Applicant thanks the Examiner for pointing out Applicant's oversight, and respectfully submits that the oversight has been corrected.

B. Rejection of Claims 1 Through 48 Under 35 U.S.C. § 103(a)

Claims 1 through 48 have been rejected under 35 U.S.C. § 103(a) as being obvious over Taccone in view of various combinations of Bergna, Swanson et al., Schimmel et al., Heine et al., Musschoot et al., and Easwaran. Applicant respectfully traverses the rejection of claims 1 through 48.

1. Rejection of Claims 1-7, 10-12, 14-15, 17-19, 21-27, 29-31, and 33-39

The Office Action rejects claims 1-7, 10-12, 14-15, 17-19, 21-27, 29-31, and 33-39 as allegedly being obvious over Taccone in view of various combinations of Bergna, Swanson et al., Schimmel et al., and Heine et al.

As an initial matter, Applicant notes that the Office Action does not provide a rejection for each and every claim. Rather, the Office Action rejects all of the claims as a group, alleging that one or more combinations of the cited references may render each of the claims obvious.

Applicant respectfully submits that the Office Action improperly rejects claims 1-7, 10-12, 14-15, 17-19, 21-27, 29-31, and 33-39 without properly citing the basis for rejecting each and every element, let alone each and every claim.

Despite this deficiency, Applicant addresses each and every claim in an effort to advance prosecution of this case.

a. Independent Claim 1

Independent claim 1 recites:

1. A method of removing a mold from a casting formed therein, comprising: directing an energized stream at the

mold to cause the mold to degrade; and dislodging at least a portion of the degraded mold from the casting.
(emphasis supplied).

It is well-established that obviousness requires "some teaching, suggestion, or motivation . . . found either explicitly or implicitly in the references themselves." MPEP 2142 and 2143. Moreover, the burden of establishing a prima facie case is on the Examiner, and the prior art references must teach or suggest all the claim limitations. That teaching or suggestion cannot be based on Applicant's disclosure. MPEP 2142; *In re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991). Applicant respectfully submits that there is no suggestion or motivation to combine the cited references.

As noted above, the Office Action does not identify which combination of references is being used to specifically reject claim 1. In that regard, Applicant is unsure of the basis for the rejection. However, in an effort to advance prosecution, Applicant addresses the rejection of claim 1, below, with reference to the primary reference by Taccone.

Claim 1 requires "directing an energized stream at the mold." Taccone is directed to a mold-breaking device. As admitted by the Examiner, Taccone "fails to teach the use of . . . energized streams" In fact, Taccone only teaches fracture of molds by solid contact with the mold, and does not even mention alternative approaches to mold-breaking. In that regard, there is no suggestion, teaching, or motivation in Taccone for using energized streams to break molds.

Insofar as Taccone provides no motivation to extend mold-breaking beyond solid contact, a combination of Taccone with any of the other cited references (i.e., Bergna, Swanson et al., Schimmel et al., and Heine et al.) is improper.

Insofar as there is no motivation in Taccone for any other mold breaking approach, other than solid contact, Applicant respectfully submits that the Office Action has not established a prima facie case of obviousness.

Moreover, the selected reference are pulled from nonagnotologist art to form a rejection. Swanson's field of invention deals with borehole's in rock formations, an art that is distinct and not agnotologist to the Applicants' filed that deals with the removal of moldings from castings. Schimmel's field of invention deals with applications to aerospace systems, an art that is once again distinct and not agnotologist to the Applicants' art.

Applicant therefore submits that claim 1 is allowable over the cited references, and respectfully solicits favorable action with reference to claim 1.

b. Independent Claim 12

Independent claim 12 recites:

12. A method of dislodging a mold from a casting formed therein, comprising: directing an energized stream at the mold, wherein the energized stream comprises an explosive charge detonated at a selected location within exterior walls of the mold; and dislodging at least a portion of the mold from the casting.
(emphasis supplied).

As noted above, the Office Action does not identify which combination of references is being used to specifically reject claim 12. In that regard, Applicant is unsure of the basis for the rejection. However, in an effort to advance prosecution, Applicant addresses the rejection of claim 12, below, with reference to the primary reference by Taccone.

Claim 12 also requires "directing an energized stream at the mold." While Taccone is directed to a mold-breaking device, Taccone only teaches fracture of molds by solid contact with the mold. Taccone does not mention alternative approaches to mold-breaking. In that regard, there is no suggestion, teaching, or motivation in Taccone for using energized streams to break molds. Thus, the combination of Taccone with any of the cited references (Bergna, Swanson et al., Schimmel et al., and Heine et al.) is improper.

Insofar as there is no motivation in Taccone for any other mold breaking approach, other than solid contact, Applicant respectfully submits that the Office Action has not established a prima facie case of obviousness.

Moreover, as previously discussed in regarding to claim 1, the selected reference are pulled from nonagnotologist art to form a rejection. Swanson's field of invention deals with borehole's in rock formations, an art that is distinct and not agnotologist to the Applicants' filed that deals with the removal of moldings from castings. Schimmel's field of invention deals with applications to aerospace systems, an art that is once again distinct and not agnotologist to the Applicants' art.

Applicant therefore submits that claim 12 is allowable over the cited references, and respectfully solicits favorable action with reference to claim 12.

b. Independent Claim 23

Independent claim 23 recites:

23. A method of dislodging a mold from a casting formed therein, comprising: stimulating the mold with an energy

pulsation; fracturing the mold; and dislodging the mold from the casting.
(emphasis supplied).

As noted above, the Office Action does not identify which combination of references is being used to specifically reject claim 23. In that regard, Applicant is unsure of the basis for the rejection. However, in an effort to advance prosecution, Applicant addresses the rejection of claim 23, below, with reference to the primary reference by Taccone.

Claim 23 also requires "stimulating the mold with an energy pulsation." Taccone makes no mention of mold-breaking other than by solid contact. In that regard, there is no suggestion, teaching, or motivation in Taccone to combine with any of Bergna, Swanson et al., Schimmel et al., or Heine et al.

Once again, the selected reference are pulled from nonagnotologist art to form a rejection. Swanson's field of invention deals with borehole's in rock formations, an art that is distinct and not agnotologist to the Applicants' filed that deals with the removal of moldings from castings. Schimmel's field of invention deals with applications to aerospace systems, an art that is once again distinct and not agnotologist to the Applicants' art.

Insofar as the Office Action has failed to establish a prima facie case of obviousness, Applicant submits that claim 23 is allowable over the cited references. Hence, Applicant respectfully request allowance of claim 23.

d. Independent Claim 35

Independent claim 35 recites:

35. A method of dislodging a mold from a casting formed therein, comprising: moving the mold along a processing path with the casting therein; directing a fluid media at exterior walls of the mold; and dislodging the mold from the casting with the fluid.

(emphasis supplied).

As noted above, the Office Action does not identify which combination of references is being used to specifically reject claim 35. In that regard, Applicant is unsure of the basis for the rejection. However, in an effort to advance prosecution, Applicant addresses the rejection of claim 35, below, with reference to the primary reference by Taccone.

Claim 35 also requires "directing a fluid media at exterior walls of the mold." Taccone makes no mention of mold-breaking other than by solid contact. In that regard, there is no suggestion, teaching, or motivation in Taccone to combine with any of Bergna, Swanson et al., Schimmel et al., or Heine et al.

Again, the selected reference are pulled from nonagnotologist art to form a rejection. Swanson's field of invention deals with borehole's in rock formations, an art that is distinct and not agnotologist to the Applicants' filed that deals with the removal of moldings from castings. Schimmel's field of invention deals with applications to aerospace systems, an art that is once again distinct and not agnotologist to the Applicants' art.

Insofar as the Office Action has failed to establish a prima facie case of obviousness, Applicant submits that claim 35 is allowable over the cited references. Hence, Applicant respectfully request allowance of claim 35.

e. Dependent Claims 2-7, 10-11, 14-15, 17-19, 21-22, 24-27, 29-31, 33-34, and 36-39

Claims 2-7 and 10-11 depend, either directly or indirectly, from allowable independent claim 1; claims 14-15, 17-19, and 21-22 depend, either directly or indirectly, from allowable independent claim 12; claims 24-27, 29-31, and 33-34 depend, either directly or indirectly, from allowable independent claim 23; and claims 36-39 depend, either directly or indirectly from allowable independent claim 35.

Insofar as these dependent claims depend, either directly or indirectly, from allowable independent claims, Applicant submits that these dependent claims are allowable. Thus, Applicant respectfully solicits favorable action with reference to dependent claims 2-7, 10-11, 14-15, 17-19, 21-22, 24-27, 29-31, 33-34, and 36-39.

f. Dependent Claims 8, 13, 20, 32, 40, and 42

Claims 8, 13, 20, 32, 40, and 42 have been rejected as being obvious over Taccone in view of various permutations of Bergna, Swanson et al., Schimmel et al., Heine et al., and Musschoot et al.

Claim 8 depends directly from allowable independent claim 1; claims 13 and 20 depend directly from allowable independent claim 12; claim 32 depends directly from allowable independent claim 23; and claims 40 and 42 depend directly from allowable independent claim 35.

Insofar as these dependent claims depend directly from allowable independent claims, Applicant submits that these dependent claims are allowable. Thus, Applicant respectfully solicits favorable action with reference to dependent claims 8, 13, 20, 32, 40, and 42.

2. Rejection of Claims 9, 16, 28, 41, and 43-47

The Office Action rejects claims 9, 16, 28, 41, and 43-47 as allegedly being obvious over Taccone in view of various permutations of Bergna, Swanson et al., Schimmel et al., Heine et al., Easwaran, and Musschoot et al.

Applicant respectfully traverses this rejection.

a. Independent Claim 44

Independent claim 44 recites:

44. A method of removing a mold from a casting formed therein, comprising: directing an energized stream at the mold when the casting is partially solidified; and, dislodging at least a portion of the mold from the casting.
(emphasis supplied).

The Office Action does not identify which combination of references is being used to specifically reject claim 44. In that regard, Applicant is unsure of the basis for the rejection. However, in an effort to advance prosecution, Applicant addresses the rejection of claim 44, below, with reference to the primary reference by Taccone.

Claim 44 requires "directing an energized stream at the mold." Taccone makes no mention of mold-breaking other than by solid contact. In that regard, there is no suggestion, teaching, or motivation in Taccone to combine with any of Bergna, Swanson et al., Schimmel et al., Heine et al., Easwaran, and Musschoot et al.

Moreover, the selected reference are pulled from nonagnotologist art to form a rejection. Swanson's field of invention deals with borehole's in rock formations, an art that is distinct and

not agnologist to the Applicants' filed that deals with the removal of moldings from castings. Schimmel's field of invention deals with applications to aerospace systems, an art that is once again distinct and not agnologist to the Applicants' art.

Insofar as there is no motivation to combine references, the Office Action has failed to establish a prima facie case of obviousness. Applicant therefore submits that claim 44 is allowable over the cited references. Hence, Applicant respectfully request allowance of claim 44.

b. Rejection of Claims 9, 16, 28, 41, 43, and 45-47

Claim 9 depends directly from allowable independent claim 1; claim 16 depends directly from allowable independent claim 12; claim 28 depends directly from allowable independent claim 23; claims 41 and 43 depend directly from allowable independent claim 35; and claims 45-47 depend directly from allowable independent claim 44.

Insofar as these dependent claims depend directly from allowable independent claims, Applicant submits that these dependent claims are allowable. Thus, Applicant respectfully solicits favorable action with reference to dependent claims 9, 16, 28, 41, 43, and 45-47.

3. Rejection of Claim 48

The Office Action rejects claim 48 as allegedly being obvious over Taccone in view of various permutations of Schneider et al., Bergna, Swanson et al., Schimmel et al., Heine et al., and Easwaran. Applicant respectfully traverses this rejection.

Claim 48 depends directly from allowable independent claim 44. Insofar as claim 48 depends directly from allowable independent claim 44, Applicant submits that claim 48 is

allowable. Thus, Applicant respectfully solicits favorable action with reference to dependent claims 48.

Plus, once again the selected reference are pulled from nonagnotologist art to form a rejection. Swanson's field of invention deals with borehole's in rock formations, an art that is distinct and not agnotologist to the Applicants' filed that deals with the removal of moldings from castings. Schimmel's field of invention deals with applications to aerospace systems, an art that is once again distinct and not agnotologist to the Applicants' art.

CONCLUSION

Applicants respectfully submit that all pending claims are in condition for allowance.

Thus, Applicants solicits favorable action with reference to pending claims 1 through 48.

No new matter has been added through this amendment.

No fees are belived to be due in connection with this response. However, should any fees be due, the Office is authorized to charge such fees to deposit account number 23-1951.

Applicants hereby make a conditional petition for an extention of time for the entry of this Amendment.

Applicants believe this application is in condition for immediate allowance. Should the Examiner believe otherwise and the matter can be resolved through an Examiner's Amendment or otherwise, the Examiner is invited to call the undersigned to discuss the matter.

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Respectfully submitted,



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